

## A Note on Stigma, Vocational Rehabilitation, and the Income of Persons with Disabilities

David Pfeiffer

*University of Hawaii at Manoa*

### Abstract

This note presents support for the position that graduates of federal employment training programs for disadvantaged persons (such as vocational rehabilitation) bear the stigma of having been on welfare and therefore are seen as less competent than other job applicants. Because they are viewed as less competent they are offered lower wages. The same view is held by many individuals with disabilities who refuse to contact state vocational rehabilitation agencies for training because they see them as welfare programs.

It is widely assumed among persons associated with vocational rehabilitation programs that the income of persons with disabilities is increased with the aid of these programs. To support these programs the ratio is calculated of the wages earned after successful rehabilitation with the cost of the program. This measure produces large positive results greater than one. Therefore, it is argued, vocational rehabilitation programs for disabled persons are cost effective.

However, some time ago Bishop (1989) challenged the notion that reliable evaluations of federally funded job training programs for disadvantaged persons can be carried out in such a manner even though it is widely used. (Bishop, 1989) He established that wage effects are not reliable estimators of productivity effects from the training. In addition, he provided evidence that they are biased because graduates are stigmatized by the label of being disadvantaged. He concluded by providing a way in which they can be evaluated by combining data on wages, productivity, and training costs.

Support for his position is found in a re-evaluation of the data used in a study of the employment of adults with disabilities in Massachusetts. (Pfeiffer and Poole, 1989) In this study data was obtained about work history, benefits, and other variables including whether the subjects had ever received vocational rehabilitation training. Specifically, for this note, if Bishop is correct, then recipients of vocational rehabilitation should be stigmatized as being less competent and therefore receive lower wages.

Vocational rehabilitation programs, however, are not usually evaluated in the same way in which the programs discussed by Bishop are judged. As already mentioned, beginning in the 1920's cost/benefit studies of vocational rehabilitation programs were done comparing the program costs with the wages earned and/or the taxes paid by the successful graduates. The ratios never fell below one and often were as high as 25 (or more) indicating that the return was as much as 25 times the cost of the program. (Levitan and Taggart, 1977; Bowe, 1980; Berkowitz, 1988) But this approach considers the program's cost effectiveness and not whether graduates of vocational rehabilitation programs receive higher incomes because of their training.

Other studies which give strong support for vocational rehabilitation (Worrall, 1988; Mann, 1988; Frank, Karst, & Boles, 1989; *Measuring Rehabilitation Effectiveness...*, 1990) come closer to the techniques used by Bishop (1989). However, virtually no other studies support this position although it is almost universally assumed to be true. In fact in the recent literature there are almost no studies of the cost effectiveness of vocational rehabilitation (except Wood, McCrea, Wood, & Merriman, 1999). There are frequent studies of the outcomes in terms of diagnoses. And except for Saraceno (1997) there appears to be no concern about welfare stigma. However, it is an important question.

Because cost/benefit ratios were used and because they were so successful in garnering support, the question of graduates of vocational rehabilitation programs being stigmatized was not raised for testing purposes. Indeed, Berkowitz (1987, chapter 5) contends that such programs were not viewed as being stigmatizing "welfare." His position is simply not correct as discussions with vocational rehabilitation counsellors and persons with disabilities will establish. The literature - for example Levitan and Taggart (1977), Pfeiffer and Giampietro (1977), Coudroglou and Poole (1984), and Collignon, Raffae, Vencill, Glass, and Grier (1988) - supports the position that a clear barrier to overcome is the welfare stigma. The probable reason that the welfare stigma was not studied is that the stigma resulting from disability is even greater and overshadowed it. (Goffman, 1963; Bowe, 1980; Wright, 1983; Pfeiffer, 1985) Nevertheless, persons with disabilities who obtain employment through vocational rehabilitation programs face the same stigma as discussed by Bishop (1989).

To test this contention a sample (n=295) was obtained from the Pfeiffer and Poole (1989) data by including only those respondents who were employed and 18-65 in age. In the sample obtained, 55% had received vocational rehabilitation services of some type and had a mean monthly individual income of \$1829 (standard deviation of \$1498). The mean age was 41 (standard deviation of 11). The variables chosen to predict monthly individual income were race, gender, age, education, whether or not vocational rehabilitation services were received, and the existence of certain disabilities.

Since Massachusetts state wide only has 4% of its population non-white and the sample 3% non-white, this variable was not statistically significant and was dropped. It would certainly be used if only urban areas were studied, but that was not possible with this sample.

The literature generally indicates that persons with mobility disabilities tend to be paid more and persons with sensory and developmental disabilities tend to be paid less than the average employed disabled person. Dummy variables indicating the existence of such disabilities were included. In order to compensate for the disparities in the measurement scales of the different variables, they were normalized forcing the regression line through the origin.

The expected model for predicting individual monthly income for employed disabled adults was:

$$\text{income} = \text{age} + \text{education} + \text{gender} - \text{vocational rehabilitation} \\ - \text{developmental disability} - \text{sensory disability} + \text{mobility disability}$$

Income was measured in dollars, age in years, and education was an ordinal variable ranging from one (eighth grade education or less) to five (college graduate). The other variables were coded one if the respondent were a man, had received vocational rehabilitation services, had a developmental disability, had a sensory disability, or had a mobility disability. Upon testing, however, the sensory and mobility disability variables were dropped because of lack of statistical significance.

It was expected that age alone would explain most of the variation in income. The results using only that variable were:

$$\text{income} = 0.80 \text{ age} \quad R \text{ square} = 0.64 \quad p < 0.0005$$

When education, gender, the receipt of vocational rehabilitation services, and existence of a developmental disability variables were entered, the results were:

$$\text{income} = 0.14 \text{ age} + 0.72 \text{ education} + 0.24 \text{ gender} - 0.19 \text{ vocational rehabilitation} \\ - 0.10 \text{ developmental-disability}$$

$$R \text{ square} = 0.72 \quad p < 0.00005$$

However, the variable age was not statistically significant ( $p = 0.20$ ) while all the rest were. Dropping age would violate the linear relationship assumption of ordinary least squares since none of the other variables were measured on an interval scale.

After reflection upon the matter another variable - age at onset of disability - was chosen to be included. There was sufficient indication in the literature that persons disabled at an early age who eventually were employed had higher incomes probably because they had time to choose an occupation compatible to them and which often paid well. The results including this new variable were:

$$\text{income} = -0.16 \text{ onset} + 0.99 \text{ education} + 0.26 \text{ gender} - 0.19 \text{ vocational-rehabilitation} - 0.14 \text{ developmental-disability}$$

$$R \text{ square} = 0.73 \quad p < 0.00005$$

All of the dependent variables were statistically significant ( $p < 0.05$ ). The earlier the age at onset, the higher the level of education, being a man, not having received vocational rehabilitation training, and not having a development disability meant the income was higher. It must be noted that education and receiving vocational rehabilitation services are not exclusive since many state agencies' services for individuals with disabilities often consist of sending them to college.

While not conclusive the results provide some support for the contention of Bishop (1989) that graduates of federal job training programs designed for disadvantaged persons (such as vocational rehabilitation for persons with disabilities) receive lower wages because of the welfare stigma connected with the programs. This problem of welfare stigma must be dealt with through educational and other programs so that the effectiveness of such programs - both from the organizational and the individual viewpoint - can be optimized.

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